



Proposed

Permit to Operate 12398

EQUIPMENT OWNER:

Celite Corporation

205129

EQUIPMENT OPERATOR:

Celite Corporation

EQUIPMENT LOCATION:

2500 Miguelito Rd, Lompoc

STATIONARY SOURCE/FACILITY:

Celite Corporation

SSID: 01735

FID: 00012

EQUIPMENT DESCRIPTION:

This permit authorizes the operation of bagging and packaging equipment. The equipment subject to this permit is listed in Table 7.

PROJECT/PROCESS DESCRIPTION:

Celite currently mines and processes diatomaceous earth (DE) at its Lompoc Plant. Celite operates four product lines (3, 5, 6, and 7 Systems) each with "wet end" and "dry end" processing. Wet diatomaceous earth crude is surface mined, crushed, milled and dried and/or calcined at high temperatures. The dried product is classified into a variety of grades and transported to the bagging and packing area via product line tie-ins of specified product bulk bins from Systems 3, 5, 6 and 7 processing lines. This allows the packaging and shipping of finished product to be bagged or bulk loaded for shipment to distributors and customers. The Celite Facility ID is 00012 and the Stationary Source ID is 1735.

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CONDITIONS:

9.A Standard Administrative Conditions

A.1 Compliance with Permit Conditions

- (a) The permittee shall comply with all permit conditions in Sections 9.A, 9.B and 9.C.
- (b) This permit does not convey property rights or exclusive privilege of any sort.
- (c) Any permit noncompliance constitutes a violation of the Clean Air Act and is grounds for enforcement action; for permit termination, revocation and re-issuance, or modification; or for denial of a permit renewal application.
- (d) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (e) A pending permit action or notification of anticipated noncompliance does not stay any permit condition.
- (f) Within a reasonable time period, the permittee shall furnish any information requested by the Control Officer, in writing, for the purpose of determining:
 - (i) compliance with the permit, or
 - (ii) whether or not cause exists to modify, revoke and reissue, or terminate a permit or for an enforcement action. [*Re: 40 CFR Part 70.6, APCD Rules 1303.D.1*]
- (g) In the event that any condition herein is determined to be in conflict with any other condition contained herein, then, if principles of law do not provide to the contrary, the condition most protective of air quality and public health and safety shall prevail to the extent feasible.

A.2 Emergency Provisions. The permittee shall comply with the requirements of the APCD, Rule 505 (Upset/Breakdown rule) and/or APCD Rule 1303.F, whichever is applicable to the emergency situation. In order to maintain an affirmative defense under Rule 1303.F, the permittee shall provide the APCD, in writing, a “notice of emergency” within 2 days of the emergency. The “notice of emergency” shall contain the information/documentation listed in Sections (1) through (5) of Rule 1303.F. [*Re: 40 CFR 70.6, APCD Rule 1303.F*]

A.3 Compliance Plan.

- (a) The permittee shall comply with all federally-enforceable requirements that become applicable during the permit term, in a timely manner, as identified in the Compliance Plan.

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- (b) For all applicable equipment, the permittee shall implement and comply with any specific compliance plan required under any federally-enforceable rules or standards. [Re: APCD Rule 1302.D.2]
- A.4 **Right of Entry.** The Regional Administrator of USEPA, the Control Officer, or their authorized representatives, upon the presentation of credentials, shall be permitted to enter upon the premises where a Part 70 Source is located or where records must be kept:
- (a) To inspect the stationary source, including monitoring and control equipment, work practices, operations, and emission-related activity;
 - (b) To inspect and duplicate, at reasonable times, records required by this Permit to Operate;
 - (c) To sample substances or monitor emissions from the source or assess other parameters to assure compliance with the permit or applicable requirements, at reasonable times. Monitoring of emissions can include source testing. [Re: APCD Rule 1303.D.2]
- A.6 **Payment of Fees.** The permittee shall reimburse the APCD for all its Part 70 permit processing and compliance expenses for the stationary source on a timely basis. Failure to reimburse on a timely basis shall be a violation of this permit and of applicable requirements and can result in forfeiture of the Part 70 permit. Operation without a Part 70 permit subjects the source to potential enforcement action by the APCD and the USEPA pursuant to section 502(a) of the Clean Air Act. [Re: APCD Rules 1303.D.1 and 1304.D.11, 40 CFR 70.6]
- A.7 **Prompt Reporting of Deviations:** The permittee shall submit a written report to the APCD documenting each and every deviation from the requirements of this permit or any applicable federal requirements within 7 days after discovery of the violation, but not later than 180-days after the date of occurrence. The report shall clearly document 1) the probable cause and extent of the deviation, 2) equipment involved, 3) the quantity of excess pollutant emissions, if any, and 4) actions taken to correct the deviation. The requirements of this condition shall not apply to deviations reported to APCD in accordance with Rule 505. *Breakdown Conditions*, or Rule 1303.F *Emergency Provisions*. [APCD Rule 1303.D.1, 40 CFR 70.6(a) (3)]
- A.8 **Reporting Requirements/Compliance Certification:** The permittee shall submit compliance certification reports to the USEPA and the Control Officer every six months. These reports shall be submitted on APCD forms and shall identify each applicable requirement/condition of the permit, the compliance status with each requirement/condition, the monitoring methods used to determine compliance, whether the compliance was continuous or intermittent, and include detailed information on the occurrence and correction of any deviations (excluding emergency upsets) from permit requirement. The reporting periods shall be each half of the calendar year, e.g., January through June for the first half of the year. These reports shall be submitted by September 1 and March 1, respectively, each year. Supporting monitoring data shall be submitted in accordance with the “Semi-Annual Monitoring/Compliance Verification Report” condition in section 9.C. The permittee shall include a written statement from the responsible

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official, which certifies the truth, accuracy, and completeness of the reports. [Re: APCD Rules 1303.D.1, 1302.D.3, 1303.2.c]

A.9 **Federally-Enforceable Conditions.** Each federally-enforceable condition in this permit shall be enforceable by the USEPA and members of the public. None of the conditions in the APCD-only enforceable section of this permit are federally-enforceable or subject to the public/USEPA review. [Re: CAAA, § 502(b)(6), 40 CFR 70.6]

A.10 **Recordkeeping Requirements.** Records of required monitoring information shall include the following:

- (a) The date, place as defined in the permit, and time of sampling or measurements;
- (b) The date(s) analyses were performed;
- (c) The company or entity that performed the analyses;
- (d) The analytical techniques or methods used;
- (e) The results of such analyses; and
- (f) The operating conditions as existing at the time of sampling or measurement;

The records (electronic or hard copy), as well as all supporting information including calibration and maintenance records, shall be maintained for a minimum of five (5) years from date of initial entry by the permittee and shall be made available to the APCD upon request. [Re: APCD Rule 1303.D.1.f, 40CFR70.6(a)(3)(ii)(A)]

A.11 **Conditions for Permit Reopening.** The permit shall be reopened and revised for cause under any of the following circumstances:

- (a) Additional Requirements: If additional applicable requirements (e.g., NSPS or MACT) become applicable to the source which has an unexpired permit term of three (3) or more years, the permit shall be reopened. Such a reopening shall be completed no later than 18 months after promulgation of the applicable requirement. However, no such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended. All such re-openings shall be initiated only after a 30-day notice of intent to reopen the permit has been provided to the permittee, except that a shorter notice may be given in case of an emergency.
- (b) Inaccurate Permit Provisions: If the APCD or the USEPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emission standards or other terms or conditions of the permit, the permit shall be reopened. Such re-openings shall be made as soon as practicable.
- (c) Applicable Requirement: If the APCD or the USEPA determines that the permit must be revised or revoked to assure compliance with any applicable requirement including a federally-enforceable requirement, the permit shall be reopened. Such re-openings shall be made as soon as practicable.

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Administrative procedures to reopen and revise/revoke/reissue a permit shall follow the same procedures as apply to initial permit issuance. Re-openings shall affect only those parts of the permit for which cause to reopen exists.

If a permit is reopened, the expiration date does not change. Thus, if the permit is reopened, and revised, then it will be reissued with the expiration date applicable to the re-opened permit. [*Re: 40 CFR 70.7, 40 CFR 70.6*]

- A.12 **Grounds for Revocation.** Failure to abide by and faithfully comply with this permit or any Rule, Order, or Regulation may constitute grounds for the APCO to petition for permit revocation pursuant to California Health & Safety Code Section 42307 *et seq.*

9.B. Generic Conditions

- B.1 **Circumvention (Rule 301):** A person shall not build, erect, install, or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total release of air contaminants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of Division 26 (Air Resources) of the Health and Safety Code of the State of California or of these Rules and Regulations. This Rule shall not apply to cases in which the only violation involved is of Section 41700 of the Health and Safety Code of the State of California, or of APCD Rule 303. [*Re: APCD Rule 301*]
- B.3 **Nuisance (Rule 303):** No pollutant emissions from any source at the permittee shall create nuisance conditions. Operations shall not endanger health, safety or comfort, nor shall they damage any property or business. [*Re: APCD Rule 303*]

9.C Requirements and Equipment Specific Conditions

- C.1. **Emissions Limitations.** The mass emissions from the equipment permitted herein shall not exceed the limits listed in Tables 3 and 4 of this permit. Compliance shall be based on the source testing, operational, monitoring, recordkeeping and reporting conditions of this permit.
- a. Baghouse Particulate Matter (PM/PM₁₀) BACT Emission Limits. Particulate (PM/PM₁₀) concentration in the exhaust from any baghouse listed in Table 5 of this permit shall not exceed 0.005 grains/dscf. Compliance with this condition shall be based on source testing and the monitoring conditions of this permit.

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C.2. **Operating Limitations.** The equipment permitted herein is subject to the following operational restrictions:

- a. Bagging/Semi-Bulk Packing Rate: Bag packing rate from each of the packers PK122A and PK122B (APCD Dev Nos 109822 and 109823) shall not exceed 15 dry short tons per hour (13.6 metric tons/hr). The semi-bulk bag packing rate from each of the semi-bulk bag packers SB132A and SB132B (APCD Dev Nos 110526 and 110527) shall not exceed 13.2 dry short tons per hour (12 metric tons/hr).
- b. Enclosed Equipment: All product processing, handling, storage, and packaging equipment permitted herein shall be completely enclosed with any particulate effluent vented to a permitted baghouse.
- c. Visible Emissions: Fugitive emissions from equipment permitted herein shall not exceed 10% opacity. No visible fugitive emissions shall be emitted from any building or structure enclosing this permitted equipment. Compliance with this condition shall be based on the monitoring conditions of this permit.
- d. Baghouse Stack Flow Rate: The air flow from each baghouse shall not exceed the corresponding exhaust flow rate (scfm) specified in Table 5.
- e. Baghouse Pressure Drop: Except during startup operations (defined for a negative pressure baghouse as powering up the exhaust blower and ending with the pressure drop across the baghouse reaching steady state or when the elapsed time since powering up of baghouse blower reaches 3 hours, whichever is sooner), the baghouse pressure drop across the Packing Station baghouse shall remain between 0.1 and 6 inches H₂O when operating. Compliance with this condition shall be based on the monitoring and recordkeeping conditions of this permit.
- f. Bin Vent Pressure Drop: The pressure drop across each positive pressure baghouse (bin vent) controlling packer bin emissions shall remain between 0.1 and 6 inches H₂O when filling the bins or recirculating product from the semi-bulk bag packer. Compliance with this condition shall be based on the monitoring and recordkeeping conditions of this permit.
- g. Visible Emissions: Baghouse stack emissions shall not exceed 7% opacity.

C.3. **Monitoring.** The equipment permitted herein is subject to the following monitoring requirements:

- a. Celite shall monitor the bagging/semi-bulk packing rate in dry short tons per hour of PK122A and PK122B (APCD Dev Nos 109822 and 109823) and of semi-bulk bag packers SB132A and SB132B (APCD Dev Nos 110526 and 110527).
- b. Each baghouse permitted herein shall be equipped with APCD-approved pressure monitoring instrumentation to monitor the pressure drop across the baghouse, in inches H₂O. Each meter

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display shall be accessible from ground level.

- c. Celite shall obtain a daily reading of the pressure drop when each baghouse is operational. If the pressure drops falls outside the permitted range specified in Table 5, immediate corrective action shall be taken to return the pressure drop to the range stated in Table 5 as required by condition 7.
- d. Once each calendar quarter, Celite shall perform a fugitive emission inspection for a one-minute period on all equipment permitted herein. If visible emissions are detected during any inspection, then a USEPA Method 9 visible emission evaluation (VEE) shall immediately be performed on the emitting equipment for a six-minute period. Celite staff certified in VEE shall perform the VEE and maintain logs in accordance with EPA Method 9.
- e. Once each calendar quarter, Celite shall use EPA Method 22 to obtain a reading of visible emissions from any building enclosing bagging or packing equipment/operations permitted herein. The Method 22 readings shall be a minimum of five minutes and shall be taken from buildings where bagging or packing operations are being conducted.

C.4. **Recordkeeping.** For any condition that requires for its effective enforcement, inspection of facility records or equipment by the APCD or its agents, Celite shall make such records available or provide access to such equipment upon notice from the APCD. Access to facilities shall mean access consistent with the California Health and Safety Code Section 41510 and Clean Air Act Section 114(a). At a minimum, the following records (electronic or manual) shall be maintained by the permittee and shall be made available to the APCD upon request:

- a. The bagging/semi-bulk packing rate in dry short tons per hour of PK122A and PK122B (APCD Dev Nos 109822 and 109823) and of semi-bulk bag packers SB132A and SB132B (APCD Dev Nos 110526 and 110527).
- b. Celite shall record whether or not daily visible emissions are present or the date and initials of a responsible person when the baghouse is non-operational (per condition 7).
- c. Daily pressure drop across each baghouse, when operational.
- d. For all baghouse malfunction, maintenance, pressure drop and visible emission correction activities:
 - (i) Date of malfunction, preventive maintenance activity, visible emission or pressure drop correction activity;
 - (ii) Description of activity;
 - (iii) Date and time taken to remedy the malfunction or perform maintenance;
 - (iv) If equipment is shut down because the visible emissions could not be eliminated within 24 hours, the date and time of shutdown of the equipment the affected baghouse serves, and the date and time of startup of the equipment served.

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- e. For each quarterly Method 9 opacity reading required by Conditions 3.e and 7.b: the name and most recent Method 9 certification date of the reader, the name of the baghouse, the date and time of the reading, and the reading.
- f. For each quarterly Method 22 fugitive reading required by Condition 3.f: the date and time of the reading, and whether visible emissions were observed.

These records are required to verify compliance with the conditions of this permit. The Control Officer may require a revised recordkeeping format if the format used is inadequate to determine compliance. The records shall be kept on file at the Celite Lompoc facility for at least five years.

C.5. **Reporting.** On a semi-annual basis, a report detailing the previous six month's activities shall be provided to the APCD. The report must list all the data listed as follows:

- a Monthly summaries of the peak bagging/semi-bulk packing rate in dry short tons per hour of PK122A and PK122B (APCD Dev Nos 109822 and 109823) and of semi-bulk bag packers SB132A and SB132B (APCD Dev Nos 110526 and 110527).
- b Results of daily visible emission observation for which visible emissions were detected for all baghouses.
- c For all baghouses, the results of the quarterly visible emission inspections obtained by the use of USEPA Method 9, which include the date and time of reading, name of reader, most recent Method 9 certification date of reader, baghouse name, individual interval readings required by Method 9, and the final reading.
- d For fugitive emissions, the results of the quarterly USEPA Method 22 inspections which include the date and time of reading, name of reader, equipment item and whether fugitive emissions were observed.
- e The days each baghouse pressure drop is outside the Table 5 range, the actual pressure drop readings and all corrective actions implemented to return the pressure drop to the value listed in Table 5 of this permit.
- f On a monthly basis, the operating hours for each baghouse.

C.6 **Best Available Control Technology (BACT).** The permittee shall apply emission control technology and plant design measures that represent Best Available Control Technology ("BACT") to the operation of the equipment/facilities as described in this permit and the APCD's Permit Evaluation for this permit. Table 6 and the Emissions, Operational, Monitoring, Recordkeeping and Reporting Conditions of this permit define the specific control technology and performance standard emission limits for BACT. The BACT shall be in place, and shall be operational at all times, for the life of the project. BACT related monitoring, recordkeeping and reporting requirements are defined in those specific permit conditions.

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C.7 Baghouse Maintenance and Inspection. Celite shall comply with the following baghouse maintenance and inspection practices:

- a. Visible Emission Observations: For permitted baghouses, permittee shall observe baghouses daily when operational. On any day a baghouse is not operating, Celite shall have a responsible person make a written entry in the applicable baghouse operation log noting that the baghouse was not in operation. The responsible person shall certify the entry by initialing or signing their name next to the entry. Celite shall perform a visual inspection of each baghouse and baghouse exhaust once per day. If visible emissions are observed during the daily observation, corrective action shall be immediately implemented. If visible emissions are not eliminated within 24 hours, Celite shall shut down the equipment controlled by the baghouse until corrective action that eliminates visible emissions is completed or obtain a variance from the APCD Hearing Board.
- b. Visible Emissions Inspections (Method 9): Once each calendar quarter, permittee shall use EPA Method 9 performed by a certified observer to obtain a reading of visible emissions from the stack of each baghouse. The Method 9 readings shall be taken in calendar quarters during which the baghouse operated and shall be taken when the baghouse is operating due to operation of some or all of the equipment it serves.

If five (5) consecutive quarters of Method 9 inspections of each enclosed baghouse results in 0% opacity, Celite may submit a request in writing to the APCD to reduce the frequency of Method 9 inspections to semi-annual. Celite shall include documentation supporting the request to reduce the inspection frequency for each baghouse. Upon APCD written approval, the semi-annual inspection frequency becomes effective.

- c. Each baghouse shall be maintained and operated consistently with the APCD-approved *Baghouse Inspection and Maintenance Plan*. This Plan shall define the scheduling, methodology, recordkeeping and reporting of the visual inspections required by this permit. The Plan shall also include the manufacturer details of the baghouse pressure drop instrumentation, including the range and calibration and maintenance procedures and frequencies and shall identify the specific diagnostic procedures to be implemented when the baghouse is found to be operating outside the visible emission or pressure drop limits listed in permit condition 9.C.2. Celite shall make the plan available for inspector use during inspection.

C.8 Source Testing. The following source testing provisions shall apply:

Celite shall conduct annual source tests on the Packing Station baghouse. In addition, Celite shall conduct tests triennially (i.e., every three years) on two passive bin vent baghouses selected by the APCD.

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The permittee shall submit a written source test plan to the APCD for approval at least thirty (30) days prior to initiation of source testing. The source test plan shall be prepared consistent with the APCD's Source Test Procedures Manual (revised May 1990 and all subsequent revisions). The Plan shall detail how the passive baghouse stack tests will be conducted under worst case loading conditions, (e.g., during the transfer of product from system bulk bins into the packer bins via the plant product pneumatic transport system.) The Plan shall also describe how the Packer Station baghouse stack test will be conducted under worst case intermittent bag filling operations. Written APCD approval of this plan shall be obtained prior to commencement of source testing. The APCD shall be notified at least ten (10) calendar days prior to the start of source testing activity to arrange for a mutually agreeable source test date when APCD personnel may observe the test.

Source test results shall be submitted to the APCD within forty-five (45) calendar days following the date of source test completion and shall be consistent with the requirements approved within the source test plan. Source test results shall document the permittee's compliance status with the permitted emission limits. If test results indicate non-compliance with the PM emission limits, the APCD may require an increased frequency of testing. The APCD will notify Celite in writing of a change in frequency of testing. All APCD costs associated with the review and approval of all plans and reports and the witnessing of tests shall be paid by the permittee as provided for by Rule 210.

A source test for an item of equipment shall be performed on the scheduled day of testing (the test day mutually agreed to) unless circumstances beyond the control of the operator prevent completion of the test on the scheduled day. Such circumstances include mechanical malfunction of the equipment to be tested, malfunction of the source test equipment, delays in source test contractor arrival and/or set-up, or unsafe conditions on site. Except in cases of an emergency, the operator shall seek and obtain APCD approval before deferring or discontinuing a scheduled test, or performing maintenance on the equipment item on the scheduled test day. If the test can not be completed on the scheduled day, then the test shall be rescheduled for another time with prior authorization by the APCD. Once the sample probe has been inserted into the exhaust stream of the equipment unit to be tested (or extraction of the sample has begun), the test shall proceed in accordance with the approved source test plan. In no case shall a test run be aborted except in the case of an emergency or unless approval is first obtained from the APCD. Failing to perform the source test of an equipment item on the scheduled test day without a valid reason and without APCD's authorization shall constitute a violation of this permit. If a test is postponed due to an emergency, written documentation of the emergency event shall be submitted to the APCD by the close of the business day following the scheduled test day.

The timelines listed above may be extended for good cause provided a written request is submitted to the APCD at least three (3) days in advance of the deadline, and approval for the extension is granted by the APCD.

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Table 7a. Source Test Requirements^a

Eq. ID	Equipment or Product	Test Requirements (units)	USEPA Method	Pollutants
Dev No 110525 and 110528 through Dev No 110535	Packing Station and Packer Bin Baghouses	Mass emission rate (lb/hr)	5	PM/PM ₁₀
		Outlet concentration (gr/dscf)	5/17	
		Outlet flow rate (dscfm)	1,2,3,4	PM/PM ₁₀

^a. PM is total suspended particulates; and use of PM:PM₁₀ ratio = 1 allows testing for PM only.

C.9. Testing Facilities. The permittee shall provide testing facilities at each baghouse in accordance with Rule 205.E and as specified below:

- a. Sampling stack and ports adequate for test methods applicable to the equipment being tested.
- b. Safe sampling platform(s).
- c. Safe access to sampling platform(s).
- d. Utilities for sampling and testing equipment.

C.10. Documents Incorporated by Reference. The documents listed below, including any APCD approved updates thereof, are incorporated herein by reference and shall have the full force and effect of a permit condition for this permit. These documents shall be implemented for the life of the Project and shall be made available to APCD inspection staff upon request.

- a. Baghouse Inspection and Maintenance Plan (APCD approved March 5, 2008)

C.11. Modification Requirements. Prior to making any modifications to the packing stations permitted herein, including tie-ins to any other processing equipment or processing lines at the facility, Celite shall obtain a new Authority to Construct (ATC) permit or modification to this ATC 12398.

C.12. Consistency with Analysis. Operation under this permit shall be conducted consistent with all data, specifications and assumptions included with the application and supplements thereof (as documented in the APCD's project file) and the APCD's analyses under which this permit is issued as documented in the Permit Evaluation prepared for and issued with the permit.

C.13. Equipment Maintenance. The equipment listed in this permit shall be properly maintained and kept in good condition at all times. The equipment manufacturer's maintenance manual, maintenance procedures and/or maintenance checklists (if any) shall be kept on site.

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- C.14. **Compliance.** Nothing contained within this permit shall be construed as allowing the violation of any local, state or federal rules, regulations, air quality standards or increments.
- C.15. **Severability.** In the event that any condition herein is determined to be invalid, all other conditions shall remain in force.
- C.16. **Conflict Between Permits.** The requirements or limits that are more protective of air quality shall apply if any conflict arises between the requirements and limits of this permit and any other permitting actions associated with the equipment permitted herein.
- C.17. **Access to Records and Facilities.** As to any condition that requires for its effective enforcement the inspection of records or facilities by the APCD or its agents, the permittee shall make such records available or provide access to such facilities upon notice from the APCD. Access shall mean access consistent with California Health and Safety Code Section 41510 and Clean Air Act Section 114A.
- C.18. **Emission Factor Revisions.** The APCD may update the emission factors for any calculation based on USEPA AP-42 or APCD emission factors at the next permit modification or permit reevaluation to account for USEPA and/or APCD revisions to the underlying emission factors.
- C.19. **Grounds for Revocation.** Failure to abide by and faithfully comply with this permit or any Rule, Order, or Regulation may constitute grounds for revocation pursuant to California Health & Safety Code Section 42307 *et seq.*
- C.20. **Reimbursement of Costs.** All reasonable expenses, as defined in APCD Rule 210, incurred by the APCD, APCD contractors, and legal counsel for the activities listed below that follow the issuance of this permit, including but not limited to permit condition implementation, compliance verification and emergency response, directly and necessarily related to enforcement of the permit shall be reimbursed by the permittee as required by Rule 210. Reimbursable activities include work involving: permitting, compliance, CEMS, modeling/AQIA, ambient air monitoring and air toxics.

AIR POLLUTION CONTROL OFFICER

Date

Note:

1. Next Reevaluation Due: May 2011

Attachment: Permit Evaluation for PTO No. 12398

Table 1
Celite Corporation Bagging and Packing Stations
PTO 12398
Operating Equipment Description

Equipment Category	Description	Device Specifications					Usage Data			Max Operating Schedule			
		Dev No	Feed	Parameter	Size	Units	Capacity	Units	Load	hr	day	qtr	year
Fabric Filters	Packing Sta BH125	110525			14,259	dcfm			1.0	1.0	24	2,190	8,760
	Bin Vent BH121A1	110528			1,031	dcfm			1.0	1.0	24	2,190	8,760
	Bin Vent BH121A2	110529			1,031	dcfm			1.0	1.0	24	2,190	8,760
	Bin Vent BH121B1	110530			1,031	dcfm			1.0	1.0	24	2,190	8,760
	Bin Vent BH121B2	110531			1,031	dcfm			1.0	1.0	24	2,190	8,760
	Bin Vent BH131A1	110532			1,031	dcfm			1.0	1.0	24	2,190	8,760
	Bin Vent BH131A2	110533			1,031	dcfm			1.0	1.0	24	2,190	8,760
	Bin Vent BH131B1	110534			1,031	dcfm			1.0	1.0	24	2,190	8,760
	Bin Vent BH131B2	110535			1,031	dcfm			1.0	1.0	24	2,190	8,760

Table 2
Celite Corporation Bagging and Packing Stations
PTO 12398
Equipment Emission Factors

Equipment Category	Description	Dev No	Emission Factors						Units
			NO _x	ROC	CO	SO _x	PM	PM ₁₀	
Fabric Filters	Packing Sta BH125	110525					0.005	0.005	grains/scf
	Bin Vent BH121A1	110528					0.005	0.005	grains/scf
	Bin Vent BH121A2	110529					0.005	0.005	grains/scf
	Bin Vent BH121B1	110530					0.005	0.005	grains/scf
	Bin Vent BH121B2	110531					0.005	0.005	grains/scf
	Bin Vent BH131A1	110532					0.005	0.005	grains/scf
	Bin Vent BH131A2	110533					0.005	0.005	grains/scf
	Bin Vent BH131B1	110534					0.005	0.005	grains/scf
	Bin Vent BH131B2	110535					0.005	0.005	grains/scf

Table 3
Celite Corporation Bagging and Packing Stations
PTO 12398
Hourly and Daily Emissions

Equipment Category	Description	Dev No	NO _x		ROC		CO		SO _x		PM		PM ₁₀	
			lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day	lb/hr	lb/day
Fabric Filters	Packing Sta BH125	110525									0.61	14.67	0.61	14.67
	Bin Vent BH121A1	110528									0.04	1.06	0.04	1.06
	Bin Vent BH121A2	110529									0.04	1.06	0.04	1.06
	Bin Vent BH121B1	110530									0.04	1.06	0.04	1.06
	Bin Vent BH121B2	110531									0.04	1.06	0.04	1.06
	Bin Vent BH131A1	110532									0.04	1.06	0.04	1.06
	Bin Vent BH131A2	110533									0.04	1.06	0.04	1.06
	Bin Vent BH131B1	110534									0.04	1.06	0.04	1.06
	Bin Vent BH131B2	110535									0.04	1.06	0.04	1.06
Total			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	23.15	0.96	23.15

Table 4
Celite Corporation Bagging and Packing Stations
PTO 12398
Quarterly and Annual Emissions

Equipment Category	Description	Dev No	NO _x		ROC		CO		SO _x		PM		PM ₁₀	
			TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY	TPQ	TPY
Fabric Filters	Packing Sta BH125	110525									0.67	2.68	0.67	2.68
	Bin Vent BH121A1	110528									0.05	0.19	0.05	0.19
	Bin Vent BH121A2	110529									0.05	0.19	0.05	0.19
	Bin Vent BH121B1	110530									0.05	0.19	0.05	0.19
	Bin Vent BH121B2	110531									0.05	0.19	0.05	0.19
	Bin Vent BH131A1	110532									0.05	0.19	0.05	0.19
	Bin Vent BH131A2	110533									0.05	0.19	0.05	0.19
	Bin Vent BH131B1	110534									0.05	0.19	0.05	0.19
	Bin Vent BH131B2	110535									0.05	0.19	0.05	0.19
Total			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.06	4.22	1.06	4.22

Table 5

**Celite Corporation Bagging and Packing Stations
PTO 12398
Summary of Baghouse Parameters**

Baghouse Description	APCD Device No.	Celite ID	Bag Dia, in	Bag Lgth, ft	# of Bags	Gross Fabric Area, sqft	Net Fabric Area ¹ , sqft	Air-to- cloth ratio. cfm/sqft	Δp , in H ₂ O	Pos or Neg Pressure	Process Temp, F	Blower flow rate, scfm	Blower HP	Filter Fabric Material	Cleaning Method	On/Off Line Clean
Packing Station BH	110525	BH125	20	5	200	5041	3230	4.41	0.1 to 6	Neg	60	14259	30	Donaldson Tetratex (PTFE) coating on 16 oz Polyester	Pulse jet	On
Packer Bin (BN121A) BH	110528	BH121A1	20	5	20	504	323	3.19	0.1 to 6	Pos	60	1031	NA	Donaldson Tetratex (PTFE) coating on 16 oz Polyester	Pulse jet	On
Packer Bin (BN121A) BH	110529	BH121A2	20	5	20	504	323	3.19	0.1 to 6	Pos	60	1031	NA	Donaldson Tetratex (PTFE) coating on 16 oz Polyester	Pulse jet	On
Packer Bin (BN121B) BH	110530	BH121B1	20	5	20	504	323	3.19	0.1 to 6	Pos	60	1031	NA	Donaldson Tetratex (PTFE) coating on 16 oz Polyester	Pulse jet	On
Packer Bin (BN121B) BH	110531	BH121B2	20	5	20	504	323	3.19	0.1 to 6	Pos	60	1031	NA	Donaldson Tetratex (PTFE) coating on 16 oz Polyester	Pulse jet	On
Packer Bin (BN131A) BH	110532	BH131A1	20	5	20	504	323	3.19	0.1 to 6	Pos	60	1031	NA	Donaldson Tetratex (PTFE) coating on 16 oz Polyester	Pulse jet	On
Packer Bin (BN131A) BH	110533	BH131A2	20	5	20	504	323	3.19	0.1 to 6	Pos	60	1031	NA	Donaldson Tetratex (PTFE) coating on 16 oz Polyester	Pulse jet	On
Packer Bin (BN131B) BH	110534	BH131B1	20	5	20	504	323	3.19	0.1 to 6	Pos	60	1031	NA	Donaldson Tetratex (PTFE) coating on 16 oz Polyester	Pulse jet	On
Packer Bin (BN131B) BH	110535	BH131B2	20	5	20	504	323	3.19	0.1 to 6	Pos	60	1031	NA	Donaldson Tetratex (PTFE) coating on 16 oz Polyester	Pulse jet	On

Note 1: Net Fabric Area taken from vendor literature.

Table 6
Best Available Control Technology

Emission Source	Pollutant	BACT Technology	BACT Performance Standard
Product processing	PM/PM ₁₀	Fabric filter	Stack outlet concentration shall be equal to or less than 0.005 grains/dscf
Product transfer, handling, and conveyance.	PM/PM ₁₀	Fully enclosed and vented to a particulate control device.	All product transport lines, transfer points, and packing stations shall be fully enclosed and vented to a baghouse.

Table 7
Equipment List

PTO 12398 / FID: 00012 Celite Corporation / SSID: 01735

A PERMITTED EQUIPMENT

1 Packing Station Baghouse

<i>Device ID #</i>	110525	<i>Device Name</i>	Packing Station Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	14259.00 scf/Minute
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH125
<i>Model</i>	DLMC 4/5/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	BH125 contains 200 bags (each approx 20in D X 5ft L); del p = 0.1 - 6 in WC; neg pressure; rating of blower (Celite ID BL125) = 30 HP; blower flow rate = 14,259 scfm; a/c ratio = 4.41; op temp = 60F		

2 Semi Bulk Bag Filler

<i>Device ID #</i>	110526	<i>Device Name</i>	Semi Bulk Bag Filler
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Stone Container Corp	<i>Operator ID</i>	SB132A
<i>Model</i>	MBS-1000	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Bagging rate = 13.2 short tons/hour (12 mt/hr)		

3 Semi Bulk Bag Filler

<i>Device ID #</i>	110527	<i>Device Name</i>	Semi Bulk Bag Filler
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Stone Container Corp	<i>Operator ID</i>	SB132B
<i>Model</i>	MBS-1000	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device Description</i>	Bagging rate = 13.2 short tons/hour (12 mt/hr)		

4 Packer Bin (BN121A) Baghouse

<i>Device ID #</i>	110528	<i>Device Name</i>	Packer Bin (BN121A) Baghouse
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<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH121A1
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH121A1 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC;		
<i>Description</i>	positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

5 Packer Bin (BN121A) Baghouse

<i>Device ID #</i>	110529	<i>Device Name</i>	Packer Bin (BN121A) Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH121A2
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH121A2 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC;		
<i>Description</i>	positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

6 Packer Bin (BN121B) Baghouse

<i>Device ID #</i>	110530	<i>Device Name</i>	Packer Bin (BN121B) Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH121B1
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH121B1 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC;		
<i>Description</i>	positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

7 Packer Bin (BN121B) Baghouse

<i>Device ID #</i>	110531	<i>Device Name</i>	Packer Bin (BN121B) Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH121B2
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH121B2 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC;		
<i>Description</i>	positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

8 Packer Bin (BN131A) Baghouse

Device ID #	110532	Device Name	Packer Bin (BN131A) Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH131A1
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH131A1 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC;		
<i>Description</i>	positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

9 Packer Bin (BN131A) Baghouse

Device ID #	110533	Device Name	Packer Bin (BN131A) Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH131A2
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH131A2 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC;		
<i>Description</i>	positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

10 Packer Bin (BN131B) Baghouse

Device ID #	110534	Device Name	Packer Bin (BN131B) Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH131B1
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH131B1 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC;		
<i>Description</i>	positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

11 Packer Bin (BN131B) Baghouse

Device ID #	110535	Device Name	Packer Bin (BN131B) Baghouse
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>	Donaldson	<i>Operator ID</i>	BH131B2
<i>Model</i>	DLMV 30/15	<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	BH131B2 contains 20 bags (each approx 20 in D X 5 ft L); del p = 0.1 - 6 in WC;		
<i>Description</i>	positive pressure; air flow 1031 scfm, a/c ratio = 3.2; op temp = 60F.		

12 Blower

<i>Device ID #</i>	110536	<i>Device Name</i>	Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BL125
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Serving BH125 (Dev No 110525); HP rating = 30 HP		
<i>Description</i>			

13 Blower

<i>Device ID #</i>	110537	<i>Device Name</i>	Blower
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BL 132
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Serving Semi Bulk Bag Fillers SB132A and B (Dev Nos 110526 & 110527); HP		
<i>Description</i>	rating = 3 HP		

14 Bag Packer

<i>Device ID #</i>	109822	<i>Device Name</i>	Bag Packer
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	PK122A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Bagging Capacity = 15 short tons/hr (13.6 mt/hr); packing units = 50 pound bags		
<i>Description</i>			

15 Bag Packer

<i>Device ID #</i>	109823	<i>Device Name</i>	Bag Packer
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	PK122B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Bagging Capacity = 15 short tons/hr (13.6 mt/hr); packing units = 50 pound bags		
<i>Description</i>			

16 Packer Bin

<i>Device ID #</i>	109824	<i>Device Name</i>	Packer Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN121A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 4.4 short tons (4 mt) serving bag packer PK122A (Dev No 109822)		
<i>Description</i>			

17 Packer Bin

<i>Device ID #</i>	109825	<i>Device Name</i>	Packer Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN121B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 4.4 short tons (4 mt) serving bag packer PK122B (Dev No 109823)		
<i>Description</i>			

18 Semi Bulk Packer Bin

<i>Device ID #</i>	109828	<i>Device Name</i>	Semi Bulk Packer Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN131A
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 4.4 short tons (4 mt) serving semi-bulk bag filler SB132A (Dev No 110526)		
<i>Description</i>			

19 Semi Bulk Packer Bin

<i>Device ID #</i>	109829	<i>Device Name</i>	Semi Bulk Packer Bin
<i>Rated Heat Input</i>		<i>Physical Size</i>	
<i>Manufacturer</i>		<i>Operator ID</i>	BN131B
<i>Model</i>		<i>Serial Number</i>	
<i>Location Note</i>			
<i>Device</i>	Capacity = 4.4 short tons (4 mt) serving semi-bulk bag filler SB132B (Dev No 110527)		
<i>Description</i>			



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1.0 BACKGROUND

- 1.1 General: Celite currently mines and processes diatomaceous earth (DE) at its Lompoc Plant. Celite operates four product lines (3, 5, 6, and 7 Systems) each with “wet end” and “dry end” processing. Wet diatomaceous earth crude is surface mined, crushed, milled and dried and/or calcined at high temperatures. The dried product is classified into a variety of grades and transported to the bagging and packing area via product line tie-ins of specified product bulk bins from Systems 3, 5, 6 and 7 processing lines. This allows the packaging and shipping of finished product to be bagged or bulk loaded for shipment to distributors and customers. The Celite Facility ID is 00012 and the Stationary Source ID is 1735.

As described in section 1.3 of this Permit Evaluation, during Source Compliance Demonstration Period (SCDP) source testing, the air flow through baghouse BH 125 was recorded at a level in excess of the BH 125 limit in ATC 12398. Celite requested the increased air flow and resultant emission increase be incorporated as a permit modification as part of this permitting action. The resultant NEI emission increases are addressed in section 4.3 of this Evaluation and in Attachment C. This permit action is effectively a simultaneous ATC mod and PTO with the modification rolled directly into the PTO. This permit also serves to modify Part 70 Permit 5840.

- 1.2 Project Description: There are two types of packaging/load-out of finished products from packers permitted herein: paper bags (50-lbs each) and semi-bulk bags (27 cubic feet weighing between 600 and 1100 lbs depending on product density). The automatic packaging system for paper bags has an average packing rate of 15 dry short tons/hr (13.6 metric tons/hr). Included in the system are two banks of automatic impeller valve bag packers, each with a packer bin on top, an automatic bag placer, and ultrasonic bag sealers. The semi-bulk bag filling stations each have an average rate of 13.2 dry short tons/hr (12 metric tons /hr).

The packer bins BN121A and B and semi-bulk packer bins BN131A and B each have a capacity of 4 metric tons. The packing station baghouse (BH125) controls the bag packing station. Bin vent baghouses (BH121A1 and A2, BH121B1 and B2, BH131A1 and A2, and BH 131B1 and B2) are passive baghouses that control the particulate emission from the packer bins.

The tie-in from the following existing equipment are directed to Bins BN121A and B (APCD Device Nos. 109824 and 109825) and BN131A and B (APCD Device No. 109828 and 109829):

#7 Bulk Bin (APCD Device No. 103414)
#8 Bulk Bin (APCD Device No. 103414)
East Sifter Bin (APCD Device No. 103414)
Coarse Bin (APCD Device No. 103414)

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#2 Bulk Bin (APCD Device No. 106107)
#9 Bulk Bin (APCD Device No. 103493)
#10 Bulk Bin (APCD Device No. 103493)
3SC Bin (APCD Device No. 106106)
#3 Bulk Bin (APCD Device No. 103309)
#4 Bulk Bin (APCD Device No. 103309)
#1 Bulk Bin (APCD Device No. 106107)
5P Bin (APCD Device No. 103332)
6A Bin (APCD Device No. 103354)
3P Bin (APCD Device No. 106107)
Silos 101-108 (APCD Device Nos. 109214, 109216, 109217, 109218, 109219, 109220, 109221, 109222)

The tie-ins to existing equipment are implemented using existing connections on each of the bins. The existing connections are connected to the packer bins for packing in the new Haver bag packers or semi-bulk packers. These packers are tied in to existing bins using hard piped connections and flex-lines. Transport of product will use existing product pumps and existing Sudorbilt blowers (APCD Dev no 103373). These tie-ins to existing bulk bins serve the System 7 production line.

Particulate emissions from the bag filling at bag packing stations PK122A and B will be controlled by a single negative pressure baghouse (APCD Dev No 110525). Particulate emissions from the all packer bulk bins will be controlled by dual positive pressure baghouses on each bin. Particulate emissions from semi-bulk bag filling at bag packing stations SB 132A and B are circulated to packer bins BN131 A and B using a blower powered by a 3 HP motor. The equipment specific project baghouses are shown below. Baghouse vendor emission guarantees of 0.005 grains/dscf for all models are located in the permit file.

Bagging and Packaging Baghouses

APCD Device No.	Celite Baghouse ID	Controlled Equipment Description	Baghouse Manufacturer	Model	Airflow scfm
110525	BH125	Packing Station	Donaldson	DLMC 4/5/15	14,259
110528	BH121A1	Packer Bin (BN121A)	Donaldson	DLMV 30/15	1,031
110529	BH121A2	Packer Bin (BN121A)	Donaldson	DLMV 30/15	1,031
110530	BH121B1	Packer Bin (BN121B)	Donaldson	DLMV 30/15	1,031
110531	BH121B2	Packer Bin (BN121B)	Donaldson	DLMV 30/15	1,031
110532	BH131A1	Packer Bin (BN131A)	Donaldson	DLMV 30/15	1,031
110533	BH131A2	Packer Bin (BN131A)	Donaldson	DLMV 30/15	1,031
110534	BH131B1	Packer Bin (BN131B)	Donaldson	DLMV 30/15	1,031
110535	BH131B2	Packer Bin (BN131B)	Donaldson	DLMV 30/15	1,031

- 1.3 Compliance/SCDP: The bagging and packing plant was inspected during SCDP and found in compliance with the terms and conditions of ATC 12398. Source testing of the following baghouses was conducted on the dates noted in accordance with the SCDP and source testing conditions of ATC 12398: BH125 (3-28-08), BH121A1 (3-27-08), BH121A2 (3-27-08), BH121B1 (3-27-08), BH121B2 (3-26-08), BH131B1 (4-24-08) and BH131B2 (4-24-08). All tested baghouses were found in compliance with the PM and PM10 emission limits in ATC 12398. However, the air flow

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through BH 125 was recorded at 14,259 scfm which exceeded the originally permitted limit of 11,000 scfm. The air flow for BH 125 is modified as part of this permitting action and the resulting PTE and NEI increase in PM and PM₁₀ are reflected in the IDS and NEI tables shown in this permit.

2.0 ENGINEERING ANALYSIS

- 2.1 Equipment/Processes: Project product transfer equipment are powered by electric motors, therefore, the only potential project emissions are particulates. Product is packaged into 50 pound bags by bag packers PK122A and B. Semi-bulk bags (27 cubic feet weighing between 600 and 1100 lbs depending on product density) are filled by semi-bulk packers SB 131A and B. The packers are fed by dedicated packer bins. The baghouses control particulate emissions from filling of the packer bins and from bag loading operations at bag packers PK122A and B and semi-bulk bag packers SB131A and B.
- 2.2 Emission Controls: The baghouse control devices installed on the packer bins are Donaldson Model 30/15 passive baghouses that do not contain a blower and will operate under positive pressure created from air displacement and product transport during each bin filling operation. The entire system is enclosed and all effluent is vented through the baghouse. Each packer bin contains two Donaldson DLMV 30/15 baghouses each with a maximum air flow of 1031 scfm. The particulate control device on bag packers PK122A and B is the Packing Station baghouse BH125 which is a Donaldson Model DLMC 4/5/15 negative pressure baghouse with a 30 HP blower producing a maximum air flow of 14,259 scfm.

These baghouses are designed to limit the particulate matter concentration in the exhaust to atmosphere to a level not to exceed 0.005 grains per dry standard cubic foot (gr/dscf). Pressure drop across each baghouse will be maintained between 0.1 to 6 inches of water when operating.

- 2.3 Emissions: Potential PM/PM₁₀ emissions from the Donaldson baghouses are based on the maximum rated airflow. The baghouse exhaust blower air flow rating for the negative pressure Packing Station baghouse was originally permitted at 11,000 scfm however, based on source test data gathered during SCDP, the air flow rate is increased to 14,295 scfm. The maximum air flow produced by the packer bin filling operation through each passive baghouse is permitted at 1031 scfm. The guaranteed outlet grain loading concentration (0.005 gr/dscf) and an operating schedule of 8,760 hours per year applies to all project baghouses. The general equation for particulate matter emissions is:

$$E_{(\text{lb/day})} = EF_{(\text{gr/scf})} \times Q_{(\text{scf/min})} \times 1440_{(\text{min/day})} / 7000_{(\text{gr/lb})}$$
$$E_{(\text{ton/yr})} = EF_{(\text{gr/scf})} \times Q_{(\text{scf/min})} \times 60_{(\text{min/hr})} \times 8760_{(\text{hr/yr})} / 7000_{(\text{gr/lb})} / 2000_{(\text{lb/ton})}$$

where: E = mass emission rate
EF = emission factor
Q = exhaust flow rate

The grain loading concentration is a guaranteed limit provided by the manufacturer. A copy of the vendor guarantees is located in the project file. For permitting purposes, Celite has assumed that the PM/PM₁₀ ratio is 1:1.

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Based on the above baghouse operating and design parameters, the permitted emission limits are listed in permit condition 1 of this permit. Source testing shall be conducted to verify the grain loading concentrations, air flow rate and mass emissions.

- 2.4 Reasonable Worst Case Emission Scenario: 24 hours per day and 8,760 hours per year.
- 2.5 Special Calculations: There are no special calculations.
- 2.6 BACT Analyses: The product packing station project did not exceed the Rule 802 25 lb/day BACT threshold for PM/PM₁₀ emissions however these packing stations are a part of the System 7 modification that is permitted under ATC 12105. BACT is required on all equipment that is part of the System 7 modification. The PM/PM₁₀ control technology and emission standard of 0.005 gr/dscf and the transport and handling of product within an enclosed system controlled by a baghouse proposed by Celite for this project meets the current APCD definition of BACT.
- 2.7 Enforceable Operational Limits: The permit has enforceable operating conditions to ensure compliance with APCD rules and regulations.
- 2.8 Monitoring Requirements: This permit requires the monitoring of the pressure drop across the baghouse. The permitted pressure drop range is 0.1-6 inches of water column as listed in permit condition 2. These data points were verified during SCDP per the Baghouse Inspection and Maintenance Plan approved on March 5, 2008. Periodic source testing is also required.
- 2.9 Recordkeeping and Reporting Requirements: The permit requires that specific data be recorded and reported to the APCD.

3.0 REEVALUATION REVIEW (not applicable)

4.0 REGULATORY REVIEW

- 4.1 Partial List of Applicable Rules: This project is anticipated to operate in compliance with the following rules:

- Rule 101. Compliance of Existing Facilities
- Rule 205. Standards for Granting Permits
- Rule 302. Visible Emissions
- Rule 303. Nuisance
- Rule 304. Particulate Matter - Northern Zone
- Rule 306. Dust and Fumes - Northern Zone
- Rule 309. Specific Contaminants
- Rule 505. Breakdown Procedures
- Rule 801. New Source Review
- Rule 802. Nonattainment Review
- Rule 803. Prevention of Significant Deterioration

- 4.2 40 CFR Part 60 {New Source Performance Standards}: Subpart OOO applies to nonmetallic mineral processing plant crushers, grinding mills, screening operations, bucket elevators, belt

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conveyors, bagging operations, storage bins and enclosed truck or rail car loading stations constructed, reconstructed or modified, as defined by the standard, after August 31, 1983. The product packer bins and packer units are an integral part of a nonmetallic mineral processing plant operation and are subject to Subpart OOO. As related to this permit, the Subpart OOO emission requirements are: (1) an exhaust emission limit of 0.022 gr/dscf, (2) a stack opacity limit of 7%, and (3) fugitive emissions from facility equipment not to exceed 10% opacity or no visible fugitive emissions emitted from the building enclosing these operations. Emissions from the baghouse are limited to 0.005 grains/dscf in permit condition #1, and thus will comply with Subpart OOO item #1 above. , Ongoing periodic monitoring has been included for determining compliance with APCD Rule 302 opacity limits, consistent with Part 70 permit 5840.

- 4.3 NEI Calculations: The emissions from this project constitute a net emissions increase (NEI). The project emission increase (“I”) and source NEI total is listed in Attachment C. The increase in air flow through BH 125 resulted in an NEI increase in PM and PM10 of 3.35 lb/day and 0.61 TPY respectively over what were documented in ATC 12398. These increases are incorporated into the values shown under PTO 12398 in the Attachment C NEI table.

5.0 AQIA

The APCD has not required an AQIA for this ATC modification.

6.0 OFFSETS/ERCs

- 6.1 General: The NEI particulate emission offset threshold of 80 lbs/day in Regulation VIII is not exceeded for this permitting action.
- 6.2 Offsets: Offsets are not triggered by this permitting action (see 6.1 above).
- 6.3 ERCs: This source does not generate emission reduction credits (see 6.1 above).

7.0 AIR TOXICS

Based on the 1994 toxic emissions inventory for the Lompoc plant, cancer and non-cancer toxics risks off the property were estimated to be below the APCD’s AB2588 significance thresholds.

8.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REVIEW

This project is exempt from CEQA pursuant to the Environmental Review Guidelines for the Santa Barbara County APCD (revised November 16, 2000). Appendix A.1 (*APCD Projects Exempt from CEQA*) specifically exempts Permits to Operate. No further action is necessary.

9.0 SCHOOL NOTIFICATION PROCESS

A school notice pursuant to the requirements of H&SC §42301.6 was not required.

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10.0 PUBLIC and AGENCY NOTIFICATION PROCESS

This project was not subject to public notice. The applicant was issued a draft Permit to Operate on June 20, 2008. The applicant submitted comments on July 1, 2008. The APCD responses to those comments appear in Attachment D of this permit.

11.0 FEE DETERMINATION

Fees for the APCD's work efforts are assessed on a cost reimbursement basis. The Project Code is 205129.

12.0 RECOMMENDATION

It is recommended that this permit be granted with the conditions as specified in the permit.

AQ Engineer

Date

Engineering
Supervisor

Date

ATTACHMENTS

- A. BACT Determination
- B. IDS Tables
- C. NEI Table
- D. Response to Comments

ATTACHMENT A
BACT DETERMINATION

ENGINEERING EVALUATION BACT DISCUSSION LIST

1. Pollutant(s): PM/PM₁₀
2. Emission Points: Baghouses, transport and handling.
3. BACT Determination Summary:
Technology: See Table 6 of permit.
Performance Standard: See Table 6 of permit.
4. Level of Stringency: ☒ Achieved in Practice
 ☐ Technologically Feasible
 ☐ RACT, BARCT, NSPS, NESHAPS, MACT
5. BACT Selection Process Discussion: The PM/PM₁₀ BACT for the process baghouse and bin vent baghouses is based on application materials and emission guarantees from the manufacturer, Donaldson, and documentation in previous district permits.
6. BACT Effectiveness: BACT is expected to be effective over all operating loads.
7. BACT During Non-Standard Operations: Non-standard operations were not identified by the applicant.
8. Operating Constraints: Each baghouse stack will not exceed a PM/PM₁₀ emission rate of 0.005 grains/dscf. All conveyance, transfer points, packers and ducting will be fully enclosed and vented to a baghouse.
9. Continuously Monitored BACT: CEMS are not required for this project.
10. Source Testing Requirement: Annual source testing of the Packer Station baghouse is required by the district.
11. Compliance Averaging Times: Compliance averaging times do not apply.
12. Multi-Phase Projects: This is not a multi-year project.
13. Referenced Sources: The following sources were reviewed to determine BACT:
A. Application material and manufacturers guarantees for baghouses from Donaldson
14. PSD BACT: Not Applicable

ATTACHMENT B

IDS TABLES

IDS Database Emission Tables

Table 1
Permitted Potential to Emit (PPTE)

PTO 12398 Bagging & Packing Stations

	NOx	ROC	CO	SOx	PM	PM ₁₀
lb/day	0.00	0.00	0.00	0.00	23.15	23.15
tons/year	0.00	0.00	0.00	0.00	4.22	4.22

Table 2
Facility Potential to Emit (FPTE)

	NOx	ROC	CO	SOx	PM	PM ₁₀
lb/day	53820.60	6502.69	4066.43	57880.07	26785.97	26741.38
tons/year	9218.40	1186.34	735.96	10517.97	4886.63	4878.72

Table 3
Federal Pt-70 Facility Potential to Emit (PT70 FPTE)

	NOx	ROC	CO	SOx	PM	PM ₁₀
lb/day	20871.23	10169.86	36706.85	48202.74	7185.20	7185.20
tons/year	3809.00	1856.00	6699.00	8797.00	1310.71	1310.71

Table 4
Facility Net Emission Increase (FNEI-90)

	NOx	ROC	CO	SOx	PM	PM ₁₀
lb/day	0.00	2.49	85.66	0.00	76.76	75.49
tons/year	0.00	0.46	14.44	0.00	9.56	10.97

ATTACHMENT C

NEI TABLE

TABLE - Stationary Source NEI
Part 70/APCD PTO 5840
Celite Corporation - Lompoc and Celpure Plants

I. This Project's "T" NEI-90

Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
Totals		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

II. Stationary Source "P1s"

Enter all stationary source "P1" NEI-90s below:

Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
PTO 5840-R2 ¹	Jun-03					145.40	25.25	3.60	0.23	10.46	4.25	12.12	2.13
A/P 11107	Dec-03									1.90	0.33	1.90	0.33
PTO 11008	Mar-04									6.48	1.15	1.85	0.33
PTO 11083	Apr-04									0.55	0.03	0.55	0.03
ATC/PTO 11224	Sep-04									16.07	2.57	16.07	2.57
PTO 11007	Mar-05									0.59	0.10	0.59	0.10
ATC/PTO 11224-01	Apr-06									0.48	0.08	0.48	0.08
ATC 12091	Oct-06									16.24	2.96	16.24	2.96
ATC 12208	Jan-07									19.84	3.62	19.84	3.62
ATC 12091-01 ²	Mar-07									0.00	0.00	0.00	0.00
ATC 12105	Jun-07	48.53	8.86	10.74	1.96	147.41	26.90	84.63	15.45	151.81	27.32	145.45	26.42
ATC 12208-01 ³	Aug-07									0.00	0.00	0.00	0.00
ATC 12091-02	Sep-07									11.31	2.06	11.31	2.06
ATC 12208-02	Dec-07									7.16	1.31	7.16	1.31
ATC 12315	Jan-08									33.08	1.59	16.06	0.79
ATC 12105-01	Jan-08									57.79	10.55	57.79	10.55
ATC 12091-03	Jun-08									2.06	0.38	2.06	0.38
PTO 12398 ⁴	Draft									23.15	4.22	23.15	4.22
Totals		48.53	8.86	10.74	1.96	292.81	52.15	88.23	15.68	358.97	62.52	332.62	57.88

- Notes:
1. Stationary source (Lompoc and Celpure Plant) NEI as found in Table 5.6 of P470 PTO 5840-R2 issued 6/24/03
 2. PTE remains the same under modification ATC 12091-01 as PTE under ATC 12091; therefore, no increase in PTE.
 3. PTE remains the same under modification ATC 12208-01 as PTE under ATC 12208; therefore, no increase in PTE.
 4. P1 includes ATC 12398 project plus an increase of 3.35 lb/day PM/PM10 incorporated in PTO 12398.

III. Stationary Source "P2" NEI-90 Decreases

Enter all facility "P2" NEI-90s below:

Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
PTO 11083	Apr-04									0.24	0.03	0.24	0.03
ATC 12105-01	Jan-08	28.06	5.12	6.21	1.13	85.25	15.56	12.68	2.32	80.84	14.75	80.84	14.75
Totals		28.06	5.12	6.21	1.13	85.25	15.56	12.68	2.32	81.08	14.78	81.08	14.78

IV. Stationary Source Pre-90 "D" Decreases

Enter all stationary source "D" decreases below:

Permit No.	Date Issued	NOx		ROC		CO		SOx		PM		PM10	
		lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
ATC 12105-01 ^{1,2}	Jan-08	20.47	3.74	2.04	0.37	121.90	22.15	75.55	13.36	201.13	38.18	176.05	32.13
Totals		20.47	3.74	2.04	0.37	121.90	22.15	75.55	13.36	201.13	38.18	176.05	32.13

Notes: 1. "D"-Term values in table above excludes reductions which are subject to DOI 047 ERC application (see table below).

This is necessary so that NEI remains non-negative per Rule 801

2. Original ATC 12105 NOx, SOx, and PM "D" Term adjusted to account for equipment removal in ATC 12105-01

		NOx		SOx		PM	
		lb/day	TPY	lb/day	TPY	lb/day	TPY
D Term Adjustment	Total Reductions from ATC 12105 ("D" Term)	65.82	12.01	1147.42	209.40	355.87	64.95
	I + (P1-P2) on June 11, 2007 (issue date of ATC 12105)	48.53	8.86	88.23	15.68	224.18	42.38
	Add I Term from ATC 12105-01					57.79	10.55
	Subtract Above P2 Decrease	28.06	5.12	12.68	2.32	80.84	14.75
	Remaining Reductions subject to DOI 047 application	45.35	8.27	1071.87	196.04	270.32	47.87

V. Calculated Stationary Source NEI-90

Table below summarizes stationary source NEI-90 as equal to: I + (P1-P2) -D

Term	NOx		ROC		CO		SOx		PM		PM10	
	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr	lb/day	ton/yr
I	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
P1	48.53	8.86	10.74	1.96	292.81	52.15	88.23	15.68	358.97	62.52	332.62	57.88
P2	28.06	5.12	6.21	1.13	85.25	15.56	12.68	2.32	81.08	14.78	81.08	14.78
D	20.47	3.74	2.04	0.37	121.90	22.15	75.55	13.36	201.13	38.18	176.05	32.13
NEI-90	0.00	0.00	2.49	0.46	85.66	14.44	0.00	0.00	76.76	9.56	75.49	10.97

Notes: Per Rule 801, "In no event shall the net emission increase for a stationary source be less than zero."

ATTACHMENT D
RESPONSE TO COMMENTS

The following are the APCD responses to comments on the draft permit by Celite in the letter dated July 1, 2008:

Celite Comment:

1. Celite Comment: Page 10, Condition 9.C.7.c, second to last sentence: Please revise reference of “Condition 2” to reference “Condition 9.C.2” for clarity.

2. APCD Response: The reference in Condition 9.C.7 is changed to “Condition 9.C.2” per the comment.

3. Celite Comment: Page 10, Condition 9.C.8: Please confirm grammar and punctuation in first sentence.

APCD Response: The condition language is clarified.

4. Celite Comment: Page 11, Condition 9.C.11: Celite understands that any new equipment or modification will require an ATC; this condition is not relevant to the PTO.

APCD Response: The condition make clear that an ATC is not only required for the installation of new equipment but also modifications to and additions of bagging and packing station tie-ins to any other processing equipment or processing lines at the facility.

5. Celite Comment: Table 7, Equipment List, Item 1: Please update a/c ratio to reflect 4.41, as shown in Table 5.

APCD Response: The Equipment List entry is changed to reflect an A/C ratio of 4.41 for the Packing Station Baghouse.

6. Celite Comment: Attachment B, Table 4 Facility Net Emission Increase: Please confirm that NEI values are updated and linked to values shown in Appendix C NEI Table.

APCD Response: The NEI values shown in Attachment B Table 4 agree with the values in table in Attachment C NEI.